

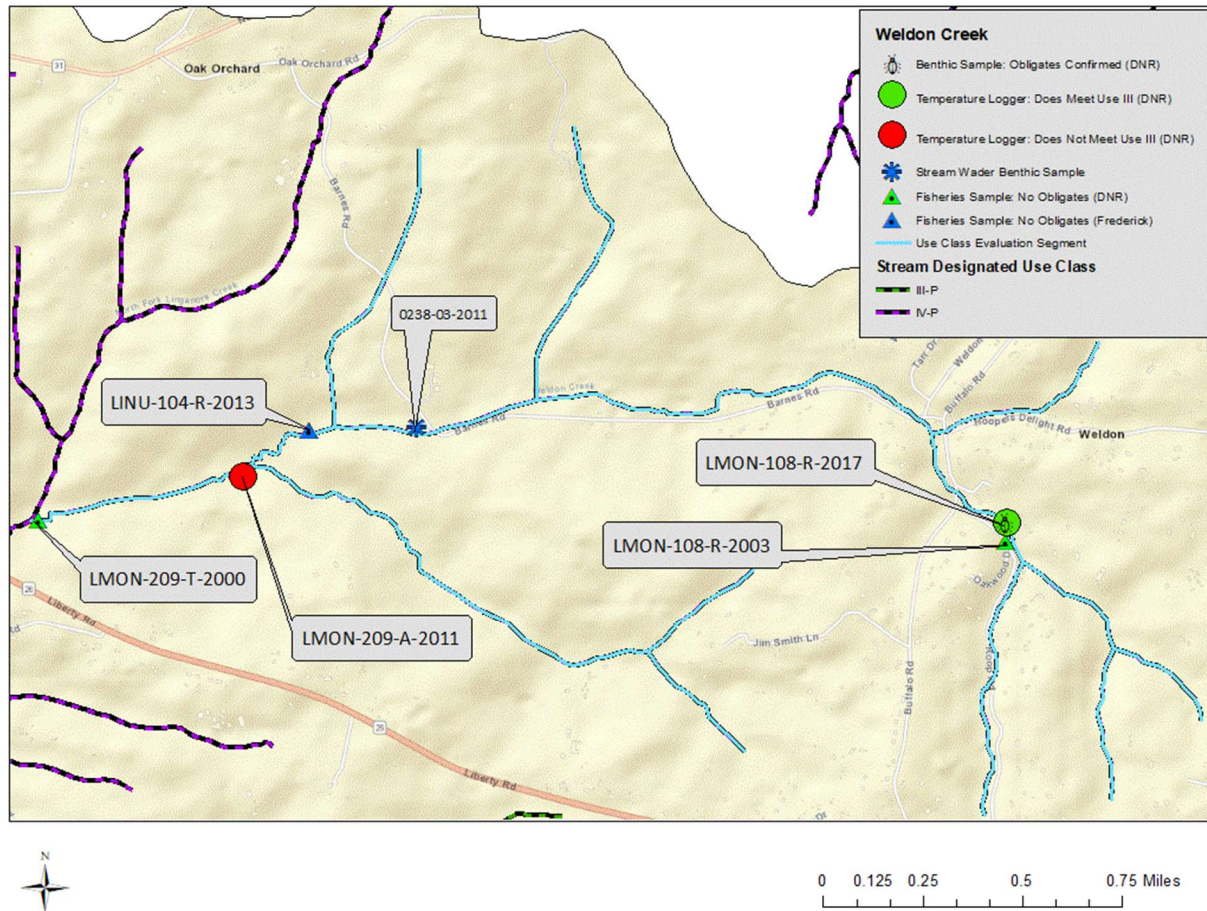
Draft Existing Use Determination and Rationale: Weldon Creek (Carroll and Frederick County)

September 2, 2020

Weldon Creek

Weldon Creek (12-digit 021403020238) in the Lower Monocacy River watershed, located southwest of New Windsor in Carroll and Frederick counties, is currently designated as Use Class IV-P. The waterbody segment may support several trout species or is a possible candidate for trout re-introduction. MDDNR MBSS biologists and Stream Waders volunteers, and Frederick County biologists conducted surveys of the waterbody segment in 2000, 2003, 2011, 2013, and 2017. Figure 1 shows the location of the sampling stations, and Tables 1 and 2 present temperature logger and biological data results.

Figure 1: Weldon Creek



Temperature Data Summary for Weldon Creek

Water temperature data were collected during 2 sampling events (Level 3 data) for Weldon Creek. One of the 2 sampling events demonstrated attainment of Class III water temperature criterion.

Table 1: Weldon Creek Temperature Logger Data

Date	Station ID	Stream	Data Submitter	# Temp Readings	Percent>20°C	Percent>24°C	Avg Daily Mean	Daily Max
2017	LMON-108-R-2017	Weldon Creek	MDDNR MBSS	6624	10%	0%	18.08	21.70
2011	LMON-209-A-2011	Weldon Creek	MDDNR MBSS	6624	42%	4%	19.52	26.72

*Water temperature logger data assessed from June to August. The “Daily Max” represents the maximum temperature from June to August.

Biological Data Summary for Weldon Creek

Tallaperla and *Sweltsa* were found during 1 sampling event at the LMON-108-R-2017 station for Weldon Creek. MDDNR MBSS sampling events did not yield any trout species, and Frederick County sampling events did not yield any coldwater obligate benthic macroinvertebrate species. No cold water obligates have been found in Weldon Creek downstream of a confluence with an unnamed tributary near Buffalo Road located at [39.478131°N, -77.118240°W].

There was 1 MDDNR Stream Waders sampling event that occurred in 2011. The sampling event did not yield any coldwater obligate benthic macroinvertebrate species.

Table 2. Weldon Creek Biological Data

Date	Station ID	Stream	Data Submitter	Species	Count	Maturity
4/9/2013	LINU-104-R-2013	Weldon Creek	Frederick County	-	-	-
4/5/2017	LMON-108-R-2017	Weldon Creek	MDDNR MBSS	<i>Tallaperla</i>	1	-
				<i>Sweltsa</i>	1	-
8/2/2011	LMON-209-A-2011	Weldon Creek	MDDNR MBSS	-	-	-
6/17/2003	LMON-108-R-2003	Weldon Creek	MDDNR MBSS	-	-	-
6/28/2000	LMON-209-T-2000	Weldon Creek	MDDNR MBSS	-	-	-
4/26/2011	0238-03-2011	Weldon Creek	MDDNR Stream Waders	-	-	-

Existing Use Determination and Rationale for Weldon Creek

Current Use Class: Class IV-P

Existing Use Determination: Weldon Creek, from the confluence with an unnamed tributary near Buffalo Road located at [39.478131°N, -77.118240°W] and all upstream surface waters, supports cold water obligates and has water temperatures that have a 90th percentile below 20°C, an average daily mean below 20°C, and daily max below 24°C.

Is this Existing Use Determination Consistent with the Current (March 2020) Designated Use Class? **No.** The existing use of Weldon Creek, as described above, requires that water temperatures remain significantly colder than the water quality criterion established to protect the current use class (Class IV-P) designation. As a result, the existing use of Weldon Creek requires protections to maintain the cold water temperatures currently found in this tributary and different than those afforded by the current use class designation of IV-P.

Changes Proposed to the Currently Designated Use Class: As shown in Figure 2, the Department recommends that Weldon Creek be redesignated to Class III-P.

Rationale for the Existing Use Determination: Available data for Weldon Creek demonstrate the presence of cold water obligate species and water temperatures that meet the Use Class III-P criteria.

Figure 2: Final Existing Use Determination for Weldon Creek

